

81  
This patent is a continuation of copending application Serial No. 09/479,458 filed January 6, 2000.

*In the Claims:*

As mentioned in the "Utility Patent Application Transmittal" that is enclosed, please cancel claims 2-130 without prejudice.

✓ Please cancel claim 1.

Please add the following claims:

- 10015005001  
B1  
Sub 127
131. (new) A bone stabilization system, comprising:  
a plate;  
an opening through the plate;  
a ring positionable within the opening, the ring comprising a movable portion; and  
a fastener positionable through the ring, the fastener configured to couple the plate to bone;  
wherein the movable portion of the ring is configured to move outwards to allow a portion of the fastener to be positioned in the opening, and wherein the movable portion is further configured to move inwards after insertion of a portion of the fastener to inhibit removal of the fastener from the plate.
132. (new) The system of claim 131, wherein the ring further comprises a curved outer surface to conform to a curved inner surface of the opening.
133. (new) The system of claim 131, wherein an outer surface of the ring compliments at least a portion of an inner surface of the opening.
134. (new) The system of claim 131, wherein an inner surface of the ring compliments at least

a portion of an outer surface of the fastener.

135. (new) The system of claim 131, wherein the movable portion of the ring is formed by a plurality of notches in the ring.

136. (new) The system of claim 131, wherein a portion of the ring engages a portion of a head of the fastener.

137. (new) The system of claim 131, wherein the fastener comprises a groove to engage the movable portion of the ring.

138. (new) The system of claim 137, wherein the groove comprises a rim formed along an edge of the fastener.

139. (new) The system of claim 131, wherein the movable portion of the ring comprises a ridge, and wherein the ridge extends into a groove in the fastener.

140. (new) The system of claim 131, wherein a diameter of a portion of the head is greater than a diameter of an inner surface of the ring such that the head exerts an expanding force on the ring when positioned in the ring.

141. (new) The system of claim 131, wherein the movable portion of the ring comprises a ridge that is configured to engage a surface of the fastener to limit an insertion depth of the fastener.

142. (new) The system of claim 131, wherein an outer width of the ring is greater than a width of the opening proximate an upper surface and a lower surface of the plate such that removal of the ring positioned within the opening is inhibited.

143. (new) The system of claim 131, wherein the ring further comprises a gap to allow the ring to expand and contract.

144. (new) The system of claim 143, wherein contracting the gap of the ring allows insertion of the ring into the opening of the plate.

145. (new) The system of claim 131, wherein the ring is configured to move within the opening of the plate to allow a shank of the fastener to be inserted into bone at an oblique angle to the plate.

146. (new) The system of claim 131, wherein the ring is configured to rotate within the opening when the fastener is positioned through the ring.

147. (new) The system of claim 131, further comprising a second fastener positioned through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in diverging directions relative to each other.

148. (new) The system of claim 131, further comprising a second fastener positioned through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in converging directions relative to each other.

149. (new) A system for stabilizing two bone portions, comprising;

a plate;

an opening through the plate;

a ring positionable within the opening, the ring comprising a deflectable portion; and

a fastener positionable through the ring, the fastener configured to couple the plate to bone;

wherein the deflectable portion of the ring is configured to deflect outwards to allow a portion of the fastener to be positioned in the opening, and wherein the deflectable portion is further configured to deflect inwards such that removal of the fastener from the plate is inhibited

during use.

150. (new) The system of claim 149, wherein the ring further comprises a curved outer surface to conform to a curved inner surface of the opening.

151. (new) The system of claim 149, wherein an outer surface of the ring compliments at least a portion of an inner surface of the opening.

152. (new) The system of claim 149, wherein an inner surface of the ring compliments at least a portion of an outer surface of the fastener.

153. (new) The system of claim 149, wherein the deflectable portion of the ring is formed by a plurality of notches in the ring.

154. (new) The system of claim 149, wherein a portion of the ring engages a portion of a head of the fastener.

155. (new) The system of claim 149, wherein the fastener comprises a groove to engage the deflectable portion of the ring.

156. (new) The system of claim 155, wherein the groove comprises a rim formed along an edge of the fastener.

157. (new) The system of claim 149, wherein the deflectable portion of the ring comprises a ridge, and wherein the ridge extends into a groove in the fastener.

158. (new) The system of claim 149, wherein a diameter of a portion of the head is greater than a diameter of an inner surface of the ring such that the head exerts an expanding force on the ring when positioned in the ring.

159. (new) The system of claim 149, wherein the deflectable portion of the ring comprises a ridge that is configured to engage a top surface of the head of the fastener to limit an insertion depth of the fastener.

160. (new) The system of claim 149, wherein an outer width of the ring is greater than a width of the opening proximate an upper surface and a lower surface of the plate such that removal of the ring positioned within the opening is inhibited.

161. (new) The system of claim 149, wherein the ring further comprises a gap to allow the ring to expand and contract.

162. (new) The system of claim 161, wherein contracting the gap of the ring allows insertion of the ring into the opening of the plate.

163. (new) The system of claim 149, wherein the ring is configured to move within the opening of the plate to allow a shank of the fastener to be inserted into bone at an oblique angle to the plate.

164. (new) The system of claim 149, wherein the ring is configured to rotate within the opening when the fastener is positioned through the ring.

165. (new) The system of claim 149, further comprising a second fastener positioned through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in diverging directions relative to each other.

166. (new) The system of claim 149, further comprising a second fastener positioned through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in converging directions relative to each other.

167. (new) A bone stabilization system, comprising:

a plate;

an opening through the plate;

a ring positionable within the opening, the ring comprising:

a lower portion; and

an upper portion, the upper portion comprising fingers extending from the lower portion, wherein the fingers are substantially parallel to the lower portion; and

a fastener positionable through the ring, the fastener comprising a head;

wherein the fingers of the ring are configured to engage a portion of the head of the fastener to inhibit removal of the fastener from the plate during use.

168. (new) The system of claim 167, wherein the ring further comprises a curved outer surface to conform to a curved inner surface of the opening.

169. (new) The system of claim 167, wherein an outer surface of the ring compliments at least a portion of an inner surface of the opening.

170. (new) The system of claim 167, wherein an inner surface of the ring compliments at least a portion of an outer surface of the fastener.

171. (new) The system of claim 167, wherein the portion of the head of the fastener comprises a groove.

172. (new) The system of claim 171, wherein the groove comprises a rim formed along an edge of the fastener head.

173. (new) The system of claim 167, wherein the upper portion of the ring further comprises a ridge, and wherein the ridge extends into a groove in the head of the fastener.

174. (new) The system of claim 167, wherein a diameter of the head is greater than a diameter of an inner surface of the ring such that the head exerts an expanding force on the ring when positioned in the ring.

175. (new) The system of claim 167, wherein an outer width of the ring is greater than a width of the opening proximate an upper surface and a lower surface of the plate such that removal of the ring positioned within the opening is inhibited.

176. (new) The system of claim 167, wherein the ring further comprises a gap to allow the ring to expand and contract.

177. (new) The system of claim 176, wherein contracting the gap of the ring allows insertion of the ring into the opening of the plate.

178. (new) The system of claim 167, wherein the upper portion of the ring further comprises a ridge that is configured to engage a top surface of the head of the fastener to limit an insertion depth of the fastener.

179. (new) The system of claim 167, wherein the ring is configured to move within the opening of the plate to allow a shank of the fastener to be inserted into bone at an oblique angle to the plate.

180. (new) The system of claim 167, wherein the ring is configured to rotate within the opening when the fastener is positioned through the ring.

181. (new) The system of claim 167, further comprising a second fastener positioned through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in diverging directions relative to each other.

182. (new) The system of claim 167, further comprising a second fastener positioned through

a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in converging directions relative to each other.

183. (new) A method for stabilizing bone, comprising:  
placing a ring within a plate, wherein the ring comprises a movable portion;  
positioning the plate adjacent to bone;  
inserting a fastener into the bone through the ring in the plate; and  
coupling the fastener to the ring with the movable portion of the ring to inhibit removal of the fastener from the plate.

184. (new) The method of claim 183, wherein an outer width of the ring is greater than a width of the opening proximate an upper surface and a lower surface of the plate such that removal of the ring positioned within the opening is inhibited.

185. (new) The method of claim 183, wherein the ring is configured to move within the opening of the plate to allow a shank of the fastener to be inserted into bone at an oblique angle to the plate.

186. (new) The method of claim 183, wherein the ring is configured to rotate within the opening when the fastener is positioned through the ring.

187. (new) The method of claim 183, further comprising inserting a second fastener through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in diverging directions relative to each other.

188. (new) The method of claim 183, further comprising inserting a second fastener through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in converging directions relative to each other.



189. (new) A method for stabilizing bone, comprising:  
positioning a ring within an opening of a plate, wherein the ring comprises a lower portion and an upper portion, the upper portion comprising fingers extending from and substantially parallel to the lower portion;  
positioning a head of a fastener within the ring; and  
engaging the head of the fastener with the fingers of the ring to inhibit removal of the fastener from the plate.

190. (new) The method of claim 189, wherein an outer width of the ring is greater than a width of the opening proximate an upper surface and a lower surface of the plate such that removal of the ring positioned within the opening is inhibited.

191. (new) The method of claim 189, wherein the ring is configured to move within the opening of the plate to allow a shank of the fastener to be inserted into bone at an oblique angle to the plate.

192. (new) The method of claim 189, wherein the ring is configured to rotate within the opening when the fastener is positioned through the ring.

193. (new) The method of claim 189, further comprising inserting a second fastener through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in diverging directions relative to each other.

194. (new) The method of claim 189, further comprising inserting a second fastener through a second ring positioned within a second opening in the plate such that the two fasteners extend through the plate in converging directions relative to each other.